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Test Excavations and Additional Surface Collections at the Peach Orchard Site (41CE477) on Bowles Creek in Cherokee County, Texas

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Introduction and Cultural Context

In March 2016, additional archaeological investigations were conducted at the Peach Orchard site (41CE477) in the Bowles Creek valley in Cherokee County, Texas. This is an area with numerous Historic Caddo Allen phase settlements, including the Peach Orchard site (Figure 1). Investigations at these sites have included pedestrian survey, systematic surface collections, intensive shovel testing, excavation of several 1 x 1 m units, and remote sensing (McKinnon 2016; Perttula and Stingley 2016, 2017; Perttula et al. 2016). The ancestral Caddo sherd collection from the sites strongly suggest they are locations of post-A.D. 1680 Historic Caddo settlements, probably by the Neche or Nechas Caddo peoples. Patton Engraved sherds, the Allen phase fine ware ceramic type in the Neches River basin, are common in the site assemblages, and other aspects of the assemblage are consistent with Neche cluster sites. Perhaps these sites were settlements occupied by a Neche or Nechas Caddo group during the late 17th-early 18th century Spanish colonization of the middle reaches of the Neches River, yet inhabited before sustained French trading activities after ca. A.D. 1720, but when several missions were established in this general locale.

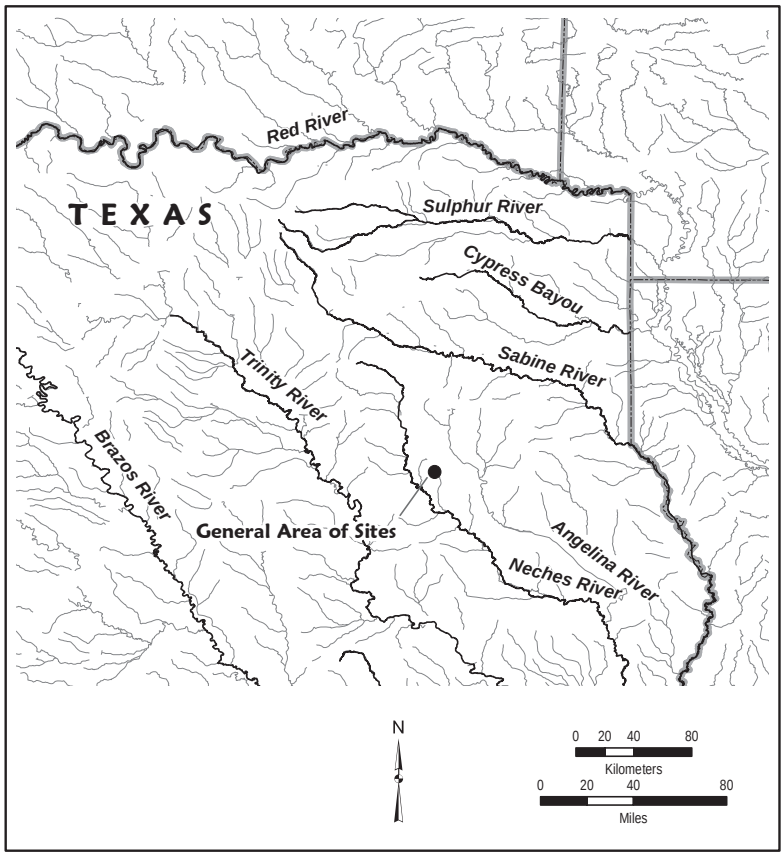

Figure 1. Location of the Historic Caddo sites in the Bowles Creek valley in Cherokee County in East Texas.

In this article we first discuss the March 2016 archaeological investigations at the Peach Orchard site. This is followed by a consideration of the analysis of the recovered artifacts in the work, and a review of the character of the Peach Orchard ceramic assemblage found at the site in several rounds of work.

Test Excavations

Four 1 x 1 m units (Units 1-4) were excavated within the surface collection unit grid at the Peach Orchard site (Figure 2). All four units were placed within the core area of the habitation deposits as based on the overall density of ceramic sherds in the surface collection units (Figure 3), specifically in surface collection units 8 (Test Unit 4), 9 (Test Unit 1), 10 (Test Unit 3), and 13 (Test Unit 2). Unit 3 was placed near one of the geophysical anomalies identified by McKinnon (2016) at the site.

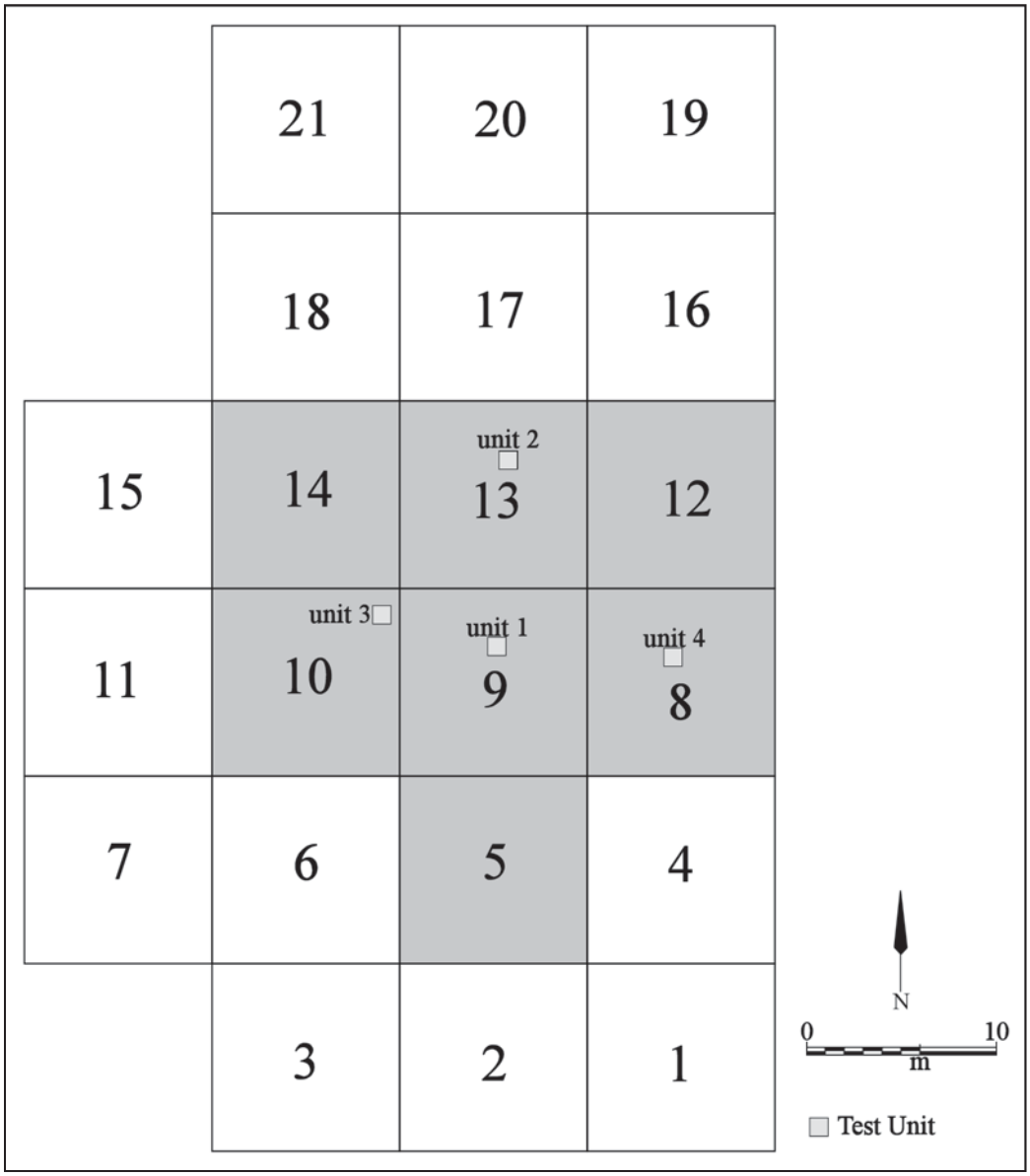

Figure 2. Location of test units in the surface collection grid at the Peach Orchard site.

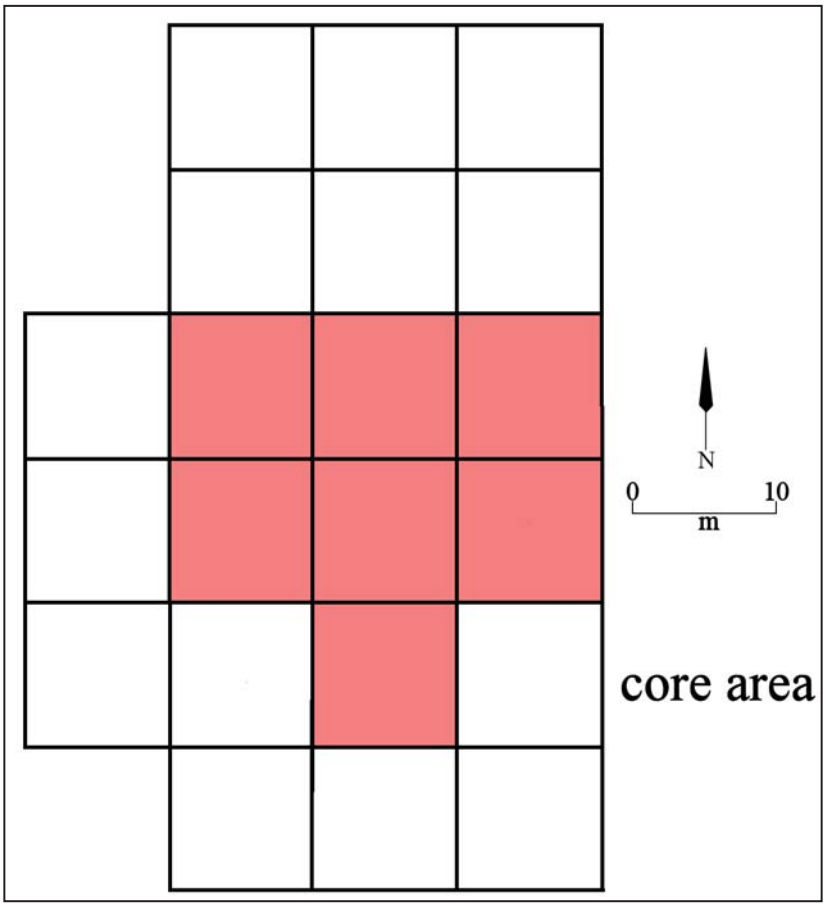

Figure 3. Core area in the surface collection grid at the Peach Orchard site.

The archaeological deposits in the four units consist of a reddish-brown sandy loam A-horizon overlying a red clay B-horizon at depths between 16-25 cm bs. No features or organic staining were noted in the units.

A total of 435 artifacts were recovered in Test Units 1-4 (Table 1), with the highest densities in Unit 3 (n=130) and Unit 1 (n=115). More than 92 percent of the recovered artifacts are ceramic sherds, both plain and decorated, followed by lithic debris (4.6 percent) and mid- to late 19th century historic artifacts (2.8 percent). The artifacts are concentrated between 0-20 cm bs, in the A-horizon deposits.

Table 1. Artifacts recovered in Units 1-4 at the Peach Orchard site.

Test Unit (depth cm bs)	PS	DS	LD	BC	AB	HIST	N
Unit 1, 0-10	18	46	-	-	-	1	65
Unit 1, 10-20	15	34	1	-	-	-	50
Unit 2, 0-10	13	38	-	-	-	-	51
Unit 2, 10-20	8	30	1	1	-	2	42
Unit 2, 20-25	2	6	3	-	-	-	11

Table 1. Artifacts recovered in Units 1-4 at the Peach Orchard site, cont.

Test Unit (depth cm bs)	PS	DS	LD	BC	AB	HIST	N
Unit 3, 0-10	13	22	3	1	1	3	43
Unit 3, 10-20	14	42	9	-	-	4	69
Unit 3, 20-25	4	13	1	-	-	-	18
Unit 4, 0-10	6	38	1	-	-	-	45
Unit 4, 10-20	5	29	1	-	-	2	37
Unit 4, 20-27	-	4	-	-	-	-	4
Totals	98	302	20	2	1	12	435

PS=plain sherds; DS=decorated sherds; LD=lithic debris; BC=burned clay; AB=animal bone; HIST=historic artifacts

Surface Collections

Surface collections were also obtained from 12 of the 10 x 10 m units in the surface collection grid (Figure 4). These surface collections include 407 plain and decorated sherds, two flake tools, 26 pieces of lithic debris, three pieces of burned clay, and two 19th century historic artifacts (Table 2). The highest densities of artifacts from surface contexts were in Units 8 and 9 in the core area of the surface collection grid (see Figure 3).

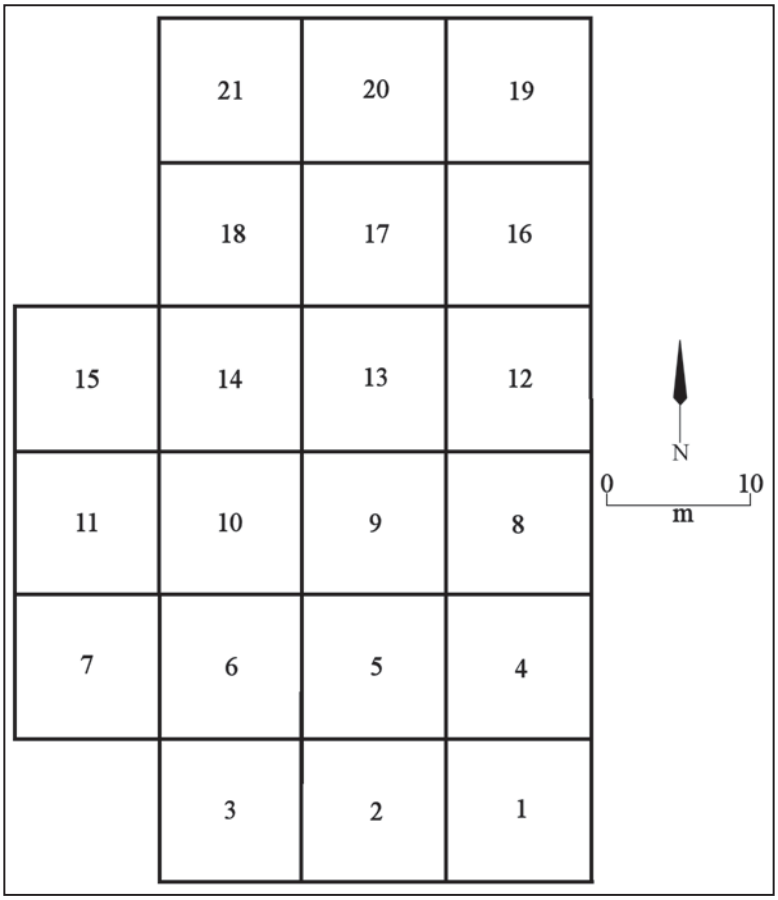

Figure 4. Surface collection grid units 1-21 at the Peach Orchard site.

Table 2. March 2016 Surface Collections at the Peach Orchard Site.

Unit	Plain Sherds	Decorated Sherds	Flake Tool	Lithic Debris	Burned Clay	Historic Artifacts
5	3	22	-	1	-	-
8	17	58	1	2	1	-
9	12	65	-	1	-	-
10	5	28	-	-	-	-
12	11	23	-	2	-	1
13	10	42	-	7	-	-
14	5	18	-	5	-	-
16	10	18	-	2	1	-
17	1	13	1	1	1	1
19	4	11	-	-	-	-
20	8	13	-	5	-	-
21	3	7	-	-	-	-
Total	89	318	2	26	3	2

Including previous surface collection efforts (see Perttula and Stingley 2016, 2017), more than 2660 artifacts have been recovered in the 2100 square meter surface collection grid at the Peach Orchard site (Table 3). More than 95 percent of the artifacts in the surface collection grid are plain and decorated sherds, about 3 percent are pieces of lithic debris, 0.6 percent are mid- to late 19th century historic artifacts, and 0.5 percent include arrow points, dart points, and flake tools.

Table 3. Summary of Artifacts Recovered from Surface Collection Units 1-21 at the Peach Orchard Site.

Unit	PS	DS	Pipe	AP	DP	FT	LD	BC	CC	HIST	N
1	23	64	-	-	-	-	3	-	-	-	90
2	11	51	-	-	-	-	2	-	-	-	64
3	28	26	-	-	-	1	2	-	-	1	58
4	27	65	-	-	-	-	4	-	-	2	98
5	55	139	-	-	-	-	2	-	-	-	196
6	17	65	-	-	-	-	2	-	-	-	84
7	24	74	-	-	-	-	1	-	-	-	99
8	48	166	-	1	-	2	14	1	-	3	235
9	44	152	1	-	1	-	5	-	-	5	208
10	55	133	-	-	-	-	2	-	-	-	190
11	18	42	-	-	-	-	1	-	-	-	61
12	53	117	-	1	-	2	11	-	-	2	186
13	65	184	1	-	1	3	11	-	1	-	266
14	42	106	-	-	-	-	11	-	-	1	160
15	21	56	-	-	-	-	1	-	-	-	78
16	39	92	-	-	-	-	5	1	-	1	138
17	19	79	-	-	-	1	2	1	-	1	103
18	24	44	-	-	-	-	-	-	-	-	68

Table 3. Summary of Artifacts Recovered from Surface Collection Units 1-21 at the Peach Orchard Site, cont.

Unit	PS	DS	Pipe	AP	DP	FT	LD	BC	CC	HIST	N
19	36	70	-	-	-	1	1	1	-	-	109
20	35	70	-	-	-	-	7	-	-	-	112
21	21	41	-	-	-	-	1	1	-	-	64
Total	705	1832	2	2	2	10	88	5	1	16	2663

PS=plain sherds; DS=decorated sherds; AP=arrow points; DP=dart points; FT=flake tools; LD=lithic debris; BC=burned clay; CC=clay coil; HIST=mid- and late 19th century historic artifacts

Artifact Analyses

A total of 875 artifacts were recovered in the March 2016 investigations at the Peach Orchard site. This includes 435 artifacts from Test Units 1-4 and 440 from surface collections in a number of 10 x 10 m units. More than 92 percent of the artifacts are sherds from ceramic vessels.

Ceramic Sherds

The March 2016 work recovered 807 ceramic sherds, including 187 from plain wares, 47 from fine wares (7.6 percent of the decorated sherds in the sample) and 573 sherds (92.4 percent) from utility ware vessels (Table 4); sherds with brushing marks (either as the sole decoration or in combination with other wet paste decorative elements) comprise 86 percent of this decorated sherd sample. The sherds are almost exclusively from grog-tempered vessels, as only 1.5 percent of the sherds have burned bone temper.

Table 4. Ceramic wares in the March 2016 assemblage from the Peach Orchard site.

Total no. of sherds	807
Decorated sherds	620
Plain ware sherds	187
Utility ware sherds	573
Fine ware sherds	47
Grog-tempered	795
Bone-tempered	12
Engraved sherds	45
Trailed sherds	2
Appliqued sherds	1
Brushed sherds	480
Brushed-appliqued	1
Brushed-incised	46
Brushed-punctated	5
Grooved	3
Incised	31
Incised-Punctated	2
Pinched	2
Punctated	2

The utility ware sherds from the March 2016 investigations at the Peach Orchard site are primarily from Bullard Brushed vessels with horizontal brushed rims and parallel (likely oriented vertically on the vessel body) brushed bodies (Table 5). A few of the brushed body sherds (1.3 percent) have opposed brushing marks. Other Bullard Brushed sherds have brushed-incised and brushed-punctated elements. One body sherd in the assemblage has a straight appliqued ridge with parallel brushing marks on either side of the ridge; this sherd may be from a Pease Brushed-Incised vessel. Another sherd simply has a straight appliqued ridge. All of the rim sherds in this collection are from utility wares.

Table 5. Decorative elements in decorated sherds in the March 2016 assemblage at the Peach Orchard site.

Decorative elements	Rim	Body	N
Utility Ware			
Appliqued			
straight appliqued ridge	-	1	1
Brushed			
horizontal brushed	6	-	6
opposed brushed	-	6	6
parallel brushed	-	468	468
Brushed-Appliqued			
straight appliqued ridge and parallel brushed	-	1	1
Brushed-Incised			
diagonal brushed-incised	1	-	1
opposed brushed-incised	-	3	3
parallel brushed-incised	-	33	33
parallel brushed and overlying cross-hatched incised lines	-	1	1
parallel brushed and overlying opposed incised lines	-	2	2
parallel brushed and overlying parallel incised lines	-	5	5
parallel brushed and overlying straight incised line	-	1	1
Brushed-Punctated			
parallel brushed and tool punctated row through the brushing	-	5	5
Grooved			
parallel grooved lines	-	1	1
straight grooved line	-	2	2
Incised			
cross-hatched incised lines	-	1	1
horizontal incised lines	1	-	1
opposed incised lines	-	6	6
parallel incised lines	-	15	15
straight incised line	-	7	7
vertical incised lines	1	-	1

Table 5. Decorative elements in decorated sherds in the March 2016 assemblage at the Peach Orchard site, cont.

Decorative elements	Rim	Body	N
Incised-Punctated			
horizontal and diagonal incised lines below row of tool punctates under the lip	1	-	1
parallel and rectilinear incised lines and row of tool punctates	-	1	1
Pinched			
straight pinched ridge	-	2	2
Punctated			
single tool punctate	-	1	1
tool punctated row	-	1	1
Fine Ware			
Engraved			
cross-hatched engraved zone	-	1	1
cross-hatched engraved lines	-	1	1
curvilinear engraved line/lines with excised tick marks	-	5	5
curvilinear engraved lines	-	3	3
horizontal and diagonal engraved lines	-	1	1
opposed engraved lines	-	1	1
parallel engraved lines	-	6	6
parallel and diagonal engraved lines	-	2	2
parallel engraved lines and narrow vertical hatched zone	-	1	1
rectilinear engraved lines	-	2	2
row of excised tick marks	-	3	3
straight engraved line with excised tick marks	-	7	7
straight engraved line	-	12	12
Trailed			
straight trailed line	-	2	2
Totals	10	610	620

Nine body sherds are from Spradley Brushed-Incised vessels, a recently defined Historic Caddo utility ware type in the Neches River basin. These sherds have parallel brushing marks with overlying incised lines oriented in several directions (see Table 5). Three body sherds are from Lindsey Grooved vessels; this is another recently defined Historic Caddo utility ware in the Neches River basin (see Marceaux 2011). The incised and incised-punctated (Figure 5) rim and body sherds are from Maydelle Incised vessels, while the sherds with pinched ridges are from Killough Pinched jars.

In the fine wares, the principal identified ceramic type in the Peach Orchard assemblage is Patton Engraved (n=15 sherds, see Table 5), the main fine ware in Historic Caddo Allen phase sites in the Neches River basin. These sherds have straight or curvilinear engraved lines with excised triangular tick marks (Figure 6a-c). They may be from Patton Engraved, *var. Allen*, *var. Freeman*, or *var. Fair* vessels (Perttula 2011:Figure 6-66). Another sherd is from a King Engraved vessel (Figure 6d). Other engraved sherds cannot be identified to type, but include a body sherd with parallel and diagonal lines (Figure 6e), another body sherd with a rectilinear element (Figure 6f), and a parallel engraved body sherd with a narrow vertical hatched zone (Figure 6g). The two trailed sherds are likely from Keno Trailed vessels.

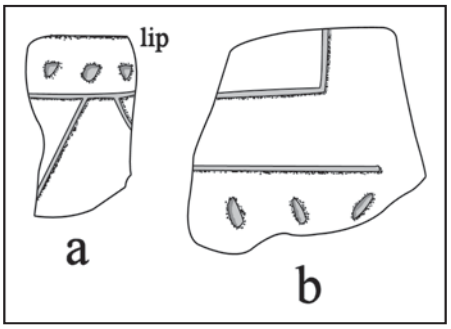

Figure 5. Selected decorative elements on utility ware sherds from the Peach Orchard site: a, Unit 1, 10-20 cm bs; b, Surface Collection Unit 20.

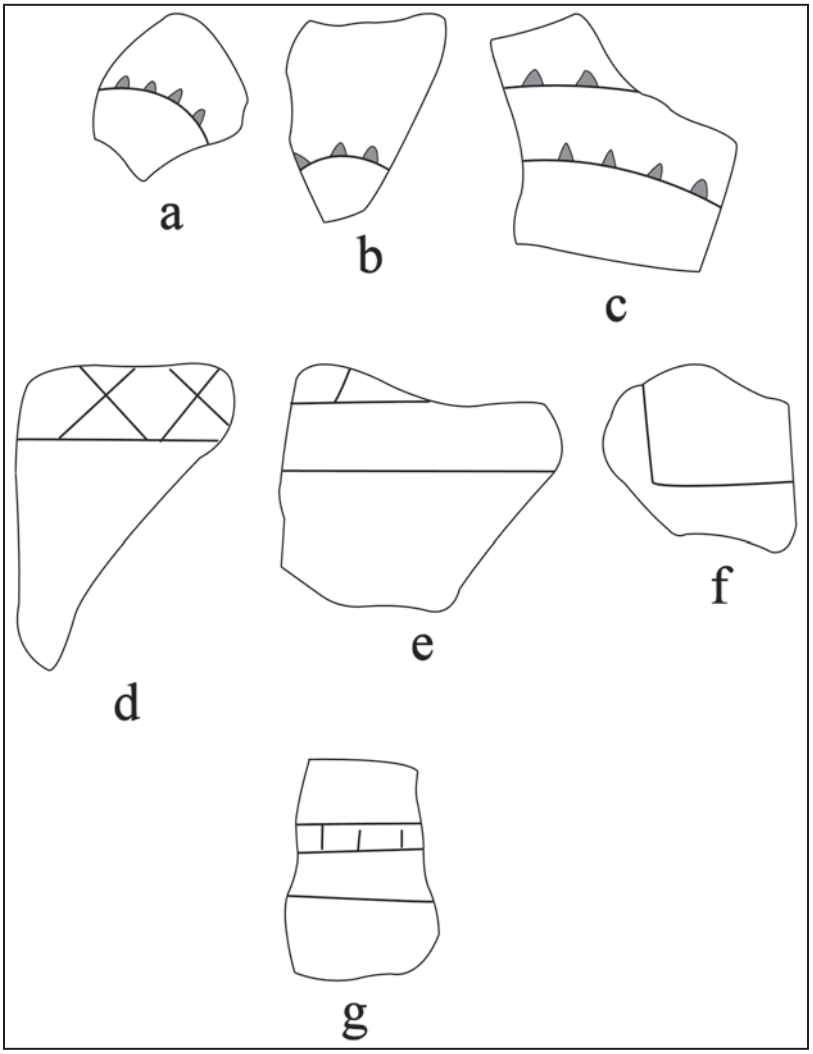

Figure 6. Selected decorative elements on fine ware sherds from the Peach Orchard site: a, Unit 1, 0-10 cm bs; b, Unit 4, 20-27 cm bs; c, Surface Collection Unit 17; d, Surface Collection Unit 10; e, Surface Collection Unit 10; f, Surface Collection Unit 5; g, Surface Collection Unit 9.

Flake Tools

Both flake tools were found in the surface collection. A side scraper fragment of gray chert, with a bifacial edge, was collected in Surface Collection Unit 8. The flake tool in Surface Collection Unit 17 is a broken expedient utilized flake of dark gray chert with a unifacially worked edge that is at least 12.2 mm in length.

Lithic Debris

Forty-six pieces of lithic debris came from the March 2016 work (Table 6), including 20 in Test Units 1-4 and 26 pieces in various surface collection grids. Approximately 52 percent of the lithic debris is comprised of locally available petrified wood, a generally poor quality raw material with which to manufacture tools. Other local raw materials in the lithic debris include quartzite (2.2 percent) and ferruginous sandstone (2.2 percent).

Table 6. Lithic debris in the March 2016 assemblage from the Peach Orchard site.

Raw Material	Cortical	Non-Cortical	N
brownish-gray chert	1	-	1
gray chert	1	4	5
light gray chert	-	3	3
dark gray chert	1	2	3
very dark gray chert	-	3	3
white chert	-	2	2
white novaculite	-	1	1
Manning Fused Glass	1	-	1
ferruginous sandstone	1	1	2
petrified wood	17	7	24
quartzite	1	-	1
Totals	23	23	46

About 39 percent of the lithic debris in this sample from the Peach Orchard are pieces of non-local chert (n=17), likely from Edwards Formation chert sources well west of the site, and one piece of white novaculite (see Table 6). Novaculite cobbles are available no closer than the Red River, well to the north of the Peach Orchard site.

The last piece of lithic debris is a core fragment of Manning Fused Glass from Surface Collection Unit 13. Manning Fused Glass is a fused volcanic glass from the Manning Formation in Southeast Texas and the southernmost part of East Texas (Brown 1976:Figure 3). This raw material was exploited by Caddo knappers in Cherokee and Nacogdoches counties from the Early Caddo period to the Historic Caddo period (Brown 1976:196-199).

Burned Clay

Five small pieces of burned clay are in the March 2016 artifact assemblage, including two pieces in the test units (Unit 2, 10-20 cm bs and Unit 3, 0-10 cm bs) and three pieces in surface collection grids (Surface Collection Units 8, 16, and 17). The burned clay pieces are likely remnants of clay hearths or earth ovens.

Animal Bone

The single piece of animal bone in the March 2016 assemblage is a deer tooth fragment from 0-10 cm bs in Unit 3.

Historic Artifacts

Historic artifacts of mid- to late 19th century age (n=14) were collected in Test Units 1-4 (n=12) and from the surface collection grid (n=2) (Table 7). Most are sherds from beer and wine bottles (n=9) as well as late 19th century Bristol glaze stoneware sherds (n=3), a rim sherd to an aqua fruit jar, and a plain whiteware body sherd. These artifacts are the residue of trash disposal of broken artifacts from a nearby late 19th century house place. The low density of artifacts in the test units and surface collections indicate that the house place is not located in the surface collection grid at the Peach Orchard site.

Table 7. Historic artifacts recovered in the March 2016 investigations at the Peach Orchard site.

Artifact class	Test Units	Surface Collection
aqua fruit jar glass rim sherd	1	-
aqua bottle glass sherd	2	-
brown bottle glass sherd	1	-
green bottle glass sherd	5	-
dark green bottle glass sherd	1	-
Bristol glaze stoneware sherd	2	1
plain whiteware body sherd	-	1

Summary and Synthesis

In March 2016, additional archaeological investigations were conducted at the Peach Orchard site (41CE477), one of a number of Historic Caddo Allen phase settlements in the Bowles Creek valley in Cherokee County, Texas (Perttula et al. 2016). This work followed up controlled surface collections (Perttula and Stingley 2016) and the excavation of 21 shovel tests in the surface collection grid (Perttula and Stingley 2017), as well as remote sensing of a 1600 square meter area of the surface collection grid (McKinnon 2016). In the latest round of work, the test excavations of four 1 x 1 m units were designed to sample the shallowly buried archaeological deposits at the site, and assess the contextual integrity of the deposits. Surface collections from a number of the 10 x 10 m surface collection grid units were also obtained in the March 2016 work.

The test excavations indicate that the archaeological deposits, a reddish-brown sandy loam, range from 0-25 cm in thickness overlying a red clay B-horizon. No cultural features or evidence of organic staining were identified in the test units, but the geophysical investigations at the Peach Orchard site

suggest there are preserved pit features and at least one Caddo structure in the geophysical survey grid (see McKinnon 2016). Artifacts from the Historic Caddo component at the site were relatively common in the test units, ca. 105.8 artifacts per square meter, and in the surface collection grid units, mainly sherds from utility ware, fine ware, and plain ware ceramic vessels. Other recovered artifacts from the Historic Caddo component include flake tools, lithic debris (primarily from locally available petrified wood), and burned clay pieces. There are also a few artifacts from a mid- to late 19th century settlement at this locale along Bowles Creek.

More than 3150 ceramic vessel sherds have been recovered from the Peach Orchard site in all phases of work conducted there (Table 8). More than 98 percent of the sherds are from grog-tempered vessels, and the majority of the sherds are from brushed utility ware Bullard Brushed jars. The plain to decorated sherd ratio is a low 0.37.

Table 8. Summary of the ceramic sherd assemblage at the Peach Orchard sites.

Attribute	Peach Orchard
No. of sherds	3153
No. of decorated sherds	2296
Plain ware	27.2%
Utility ware	66.8%
Fine ware	6.0%
P/DR	0.37
Brushed/Plain Ratio	2.25
Brushed/OWP Ratio	7.02
Grog-tempered	98.5%
Bone-tempered	1.5%
Red-slipped	<0.1%
Engraved	7.9%
Engraved-brushed	0.1%
Trailed	0.1%
Appliqued	0.2%
Brushed	80.3%
Brushed-Appliqued	0.2%
Brushed-Incised	3.0%
Brushed-Pinched	<0.1%
Brushed-Punctated	1.0%
Grooved	1.1%
Grooved-Incised	<0.1%
Grooved-Punctated	<0.1%
Incised	4.4%
Incised-Punctated	0.1%
Neck Banded	0.1%
Pinched	0.1%
Punctated	1.6%

P/DR=plain/decorated sherd ratio; OWP=other wet paste sherds

Other utility wares in the assemblage are from Killough Pinched, La Rue Neck Banded, Lindsey Grooved, and Maydelle Incised vessels, but they are uncommon, amounting to no more than 0.1-4.5 percent of the decorated sherds (see Table 8). The fine wares in the Peach Orchard ceramic assemblage comprise only 6.0 percent of the sherds. Those that can be identified are from several varieties of Patton Engraved, the most common fine ware in the assemblage, as well as sherds from King Engraved and Keno Trailed vessels.

As has been discussed previously, the ceramic assemblage from the Peach Orchard site is consistent with a Neche cluster of historic Caddo Allen phase sites on Bowles Creek and the Neches River (see Perttula 2016:Table 3). These assemblages are almost exclusively comprised of sherds from grog-tempered vessels, and with high proportions of brushed sherds to plain sherds (1.77-7.50) and substantial ratios of brushed to other wet paste sherds (5.0-13.0). Between 81-87 percent of the decorated sherds in Neche cluster sites are from brushed vessels: at the Peach Orchard site, 84.5 percent of the sherds have brushing marks (see Table 8).

Acknowledgments

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